Application No.: 10/586,015 Docket No.: CAMU-P01-002

AMENDMENTS TO THE CLAIMS

- 1-31 (Canceled)
- 32. (Currently Amended) A method for detecting a cell in a subject, the method comprising:
 - a. administering to the subject a cell that is labeled with a fluorocarbon imaging reagent; and
 - b. examining at least a portion of the subject by a nuclear magnetic resonance technique, thereby detecting a labeled cell in the subject.
- 33-44. (Cancelled)
- 45. (Currently Amended) An *ex vivo* labeled cellular formulation for administration to a subject, the formulation comprising:
 - $[[c]]\underline{a}$. a cell; and
 - [[d]]b. a fluorocarbon imaging reagent that is detectable by magnetic resonance imaging and that is associated with the cell.
- 46-56. (Cancelled)
- 57. (Currently Amended) A method for detecting transplanted cells in a transplant recipient, the method comprising:
 - [[e]]a. administering cells for transplant to a transplant recipient, at least a portion of which cells for transplant are labeled with a fluorocarbon imaging reagent;
 - [[f]]b. examining at least a portion of the subject by a nuclear magnetic resonance technique, thereby detecting a labeled cell in the subject.
- 58-68. (Canceled)

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69. (New) The method of claim 32, further comprising contacting the cell *ex vivo* with a fluorocarbon imaging reagent under conditions such that the fluorocarbon imaging reagent becomes associated with the cell prior to step a.

- 70. (New) The method of claim 32, wherein the fluorocarbon imaging reagent is a perfluoropolyether.
- 71. (New) The method of claim 32, wherein the cell is contacted with the fluorocarbon imaging reagent in the presence of an uptake enhancing reagent.
- 72. (New) The method of claim 71, wherein the uptake enhancing reagent comprises a cationic lipid.
- 73. (New) The method of claim 32, wherein at least a portion of the fluorocarbon imaging reagent is internalized into the cell.
- 74. (New) The method of claim 32, wherein at least a portion of the fluorocarbon imaging reagent is associated with the extracellular surface of the cell.
- 75. (New) The method of claim 32, wherein the fluorocarbon imaging reagent is conjugated to a cellular targeting moiety.
- 76. (New) The method of claim 75, wherein the cellular targeting moiety comprises an antibody that binds to an epitope that is exposed to the extracellular milieu.
- 77. (New) The method of claim 32, wherein the fluorocarbon imaging reagent is conjugated to an internalization moiety.
- 78. (New) The method of claim 32, wherein the cell is a mammalian cell.
- 79. (New) The method of claim 32, wherein the cell is a cell of the immune system.
- 80. (New) The method of claim 32, wherein the cell is a dendritic cell.
- 81. (New) The method of claim 32, wherein the fluorocarbon imaging reagent is formulated as an emulsion.
- 82. (New) The method of claim 32, wherein the emulsion comprises particles having a mean diameter of between 30 and 500 nm.
- 83. (New) The method of claim 32, wherein the fluorocarbon imaging reagent is a perfluorocrown ether.

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84. (New) The method of claim 83, wherein the imaging reagent is a perfluro-15-crown-5-ether.

85. (New) The method of claim 32, wherein the fluorocarbon is a perfluorinated polyether having an average formula:

$$XO(Y-O)_nZ$$

wherein Y is selected from the group consisting of:

wherein n is an integer from 8 to 20; wherein X and Z are the same and are selected from the group consisting of perfluoroalkyls, perfluoroethers, fluoroalkyls terminated with fluoroacyl, carboxyl, amide or ester, methylols, acid chlorides, amides, amidines, acrylates and esters.

- 86. (New) The method of claim 32, wherein the imaging reagent comprises an additional functional moiety.
- 87. (New) The method of claim 86, wherein the additional functional moiety is a detection moiety.
- 88. (New) The method of claim 87, wherein the detection moiety is selected from the group consisting of: a fluorescent detection moiety and a PET detection moiety.